

New Hampshire Childhood Cancer

New Hampshire, Childhood Cancer, January 2009 – Issue Brief

Introduction:

- Cancer in children is relatively uncommon, impacting fewer than twenty two of every 100,000 children each year.
- In New Hampshire, approximately 73 children aged 0-19 are diagnosed with cancer each year.
- Less than 1% of all cancer cases are diagnosed in children aged 1 to 19; whereas, over 82% of all cancers in New Hampshire are diagnosed in people aged 50 or older.
- The most common forms of childhood cancer are leukemia, lymphoma, cancer of the central nervous system (including brain and spinal cord), and soft tissue sarcomas which together account for 68% of the cases in New Hampshire children (see Table 1).

Figure1: Childhood Cancer Incidence in New Hampshire, age 0-19, 1990-2005

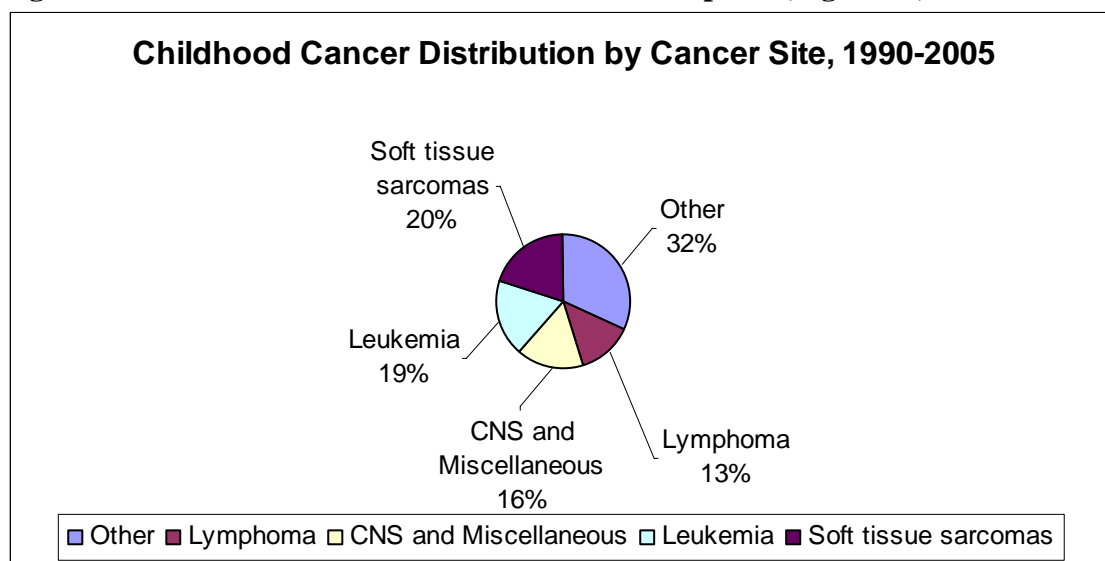
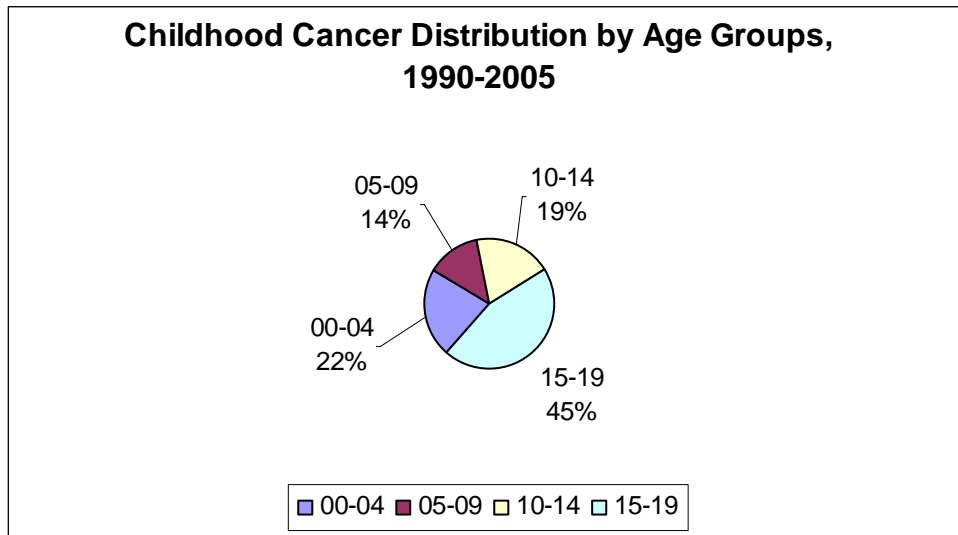
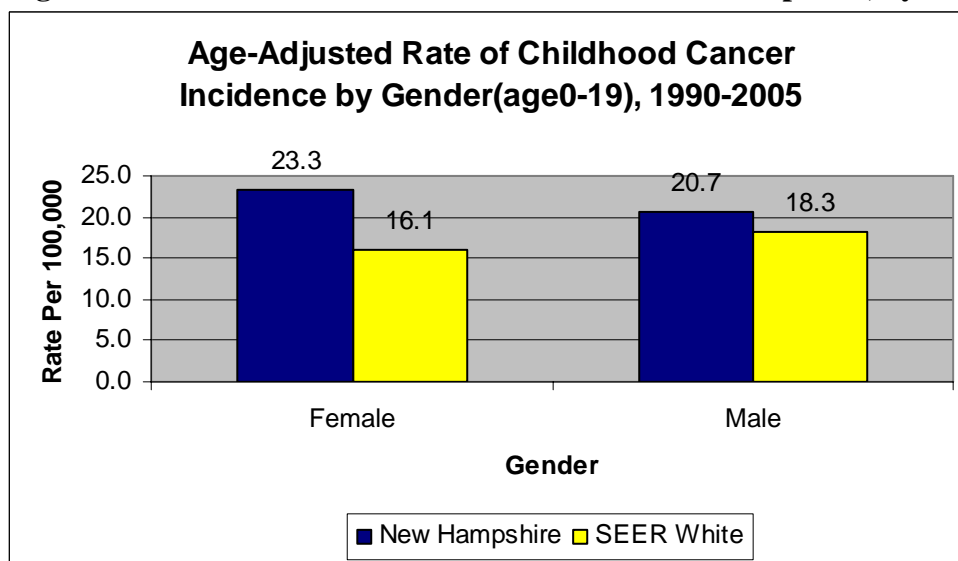


Figure2: Childhood Cancer Incidence in New Hampshire, by Age Group, 1990-2005**Figure3: Childhood Cancer Incidence Rate in New Hampshire, by Gender, 1990-2005**

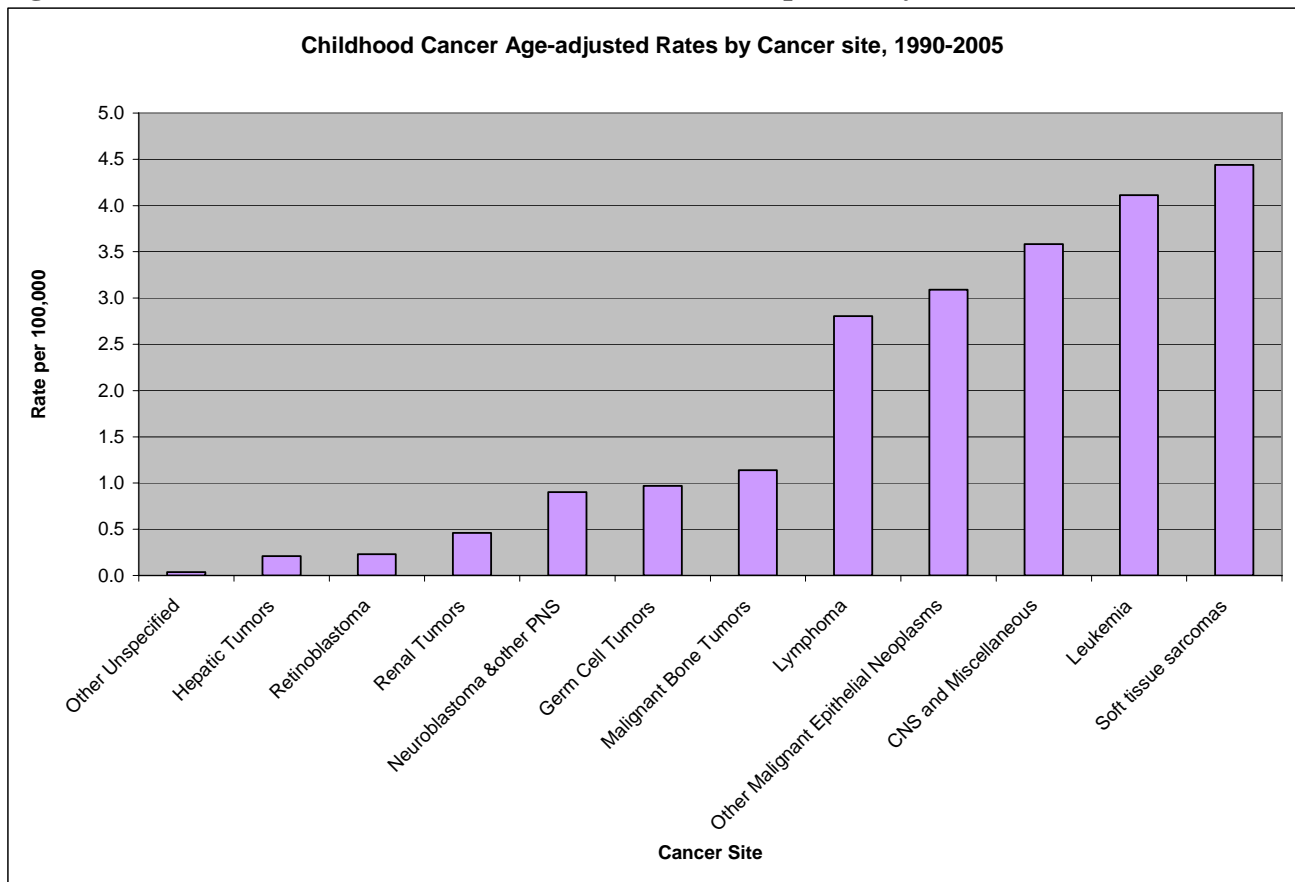
SEER White - Surveillance Epidemiology and End Results age adjusted rates for whole of US white race.

Gender differences:

- The incidence of childhood cancer is higher among females (23.3 per 100,000 per year) than males (20.7 per 100,000).
- In New Hampshire, females have a higher rate than males of certain tumors, particularly soft tissue sarcomas and thyroid carcinomas.
- In New Hampshire, males have a higher rate than females for leukemia's and lymphomas.

Table1: Age-Adjusted Childhood (age 0-19) Cancer Rates in New Hampshire, 1990-2005

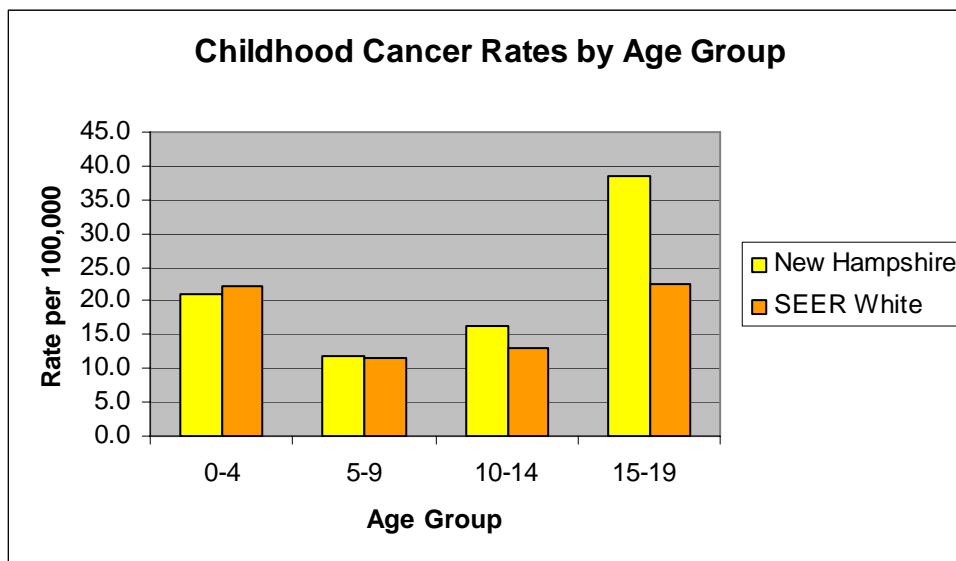
Cancer Site	Total	AA Rate	Lower CI	Upper CI	Female	AA Rate	Lower CI	Upper CI	Male	AA Rate	Lower CI	Upper CI
Other Unspecified	2	0.0	0.0	0.1	1	0.0	0.0	0.2	1	0.0	0.0	0.2
Hepatic Tumors	11	0.2	0.1	0.4	3	0.1	0.0	0.3	8	0.3	0.1	0.6
Hepatoblastoma	8	0.2	0.1	0.3	1	0.0	0.0	0.2	7	0.3	0.1	0.5
Retinoblastoma	12	0.2	0.1	0.4	5	0.2	0.1	0.5	7	0.3	0.1	0.5
Renal Tumors	24	0.5	0.3	0.7	12	0.5	0.2	0.8	12	0.5	0.2	0.8
Nephroblastoma	23	0.4	0.3	0.7	12	0.5	0.2	0.8	11	0.4	0.2	0.7
Neuroblastoma & other PNS	47	0.9	0.7	1.2	26	1.0	0.7	1.5	21	0.8	0.5	1.2
Neuroblastoma	47	0.9	0.7	1.2	26	1.0	0.7	1.5	21	0.8	0.5	1.2
Germ Cell Tumors	52	1.0	0.7	1.3	19	0.7	0.4	1.1	33	1.2	0.8	1.7
Malignant Bone Tumors	61	1.1	0.9	1.5	32	1.2	0.8	1.7	29	1.1	0.7	1.5
Osteosarcoma	34	0.6	0.4	0.9	19	0.7	0.4	1.1	15	0.5	0.3	0.9
Ewings Sarcoma	20	0.4	0.2	0.6	8	0.3	0.1	0.6	12	0.4	0.2	0.8
Lymphoma	150	2.8	2.4	3.3	63	2.4	1.8	3.1	87	3.2	2.6	3.9
Hodgkin Lymphoma	77	1.4	1.1	1.8	36	1.4	1.0	1.9	41	1.5	1.1	2.0
Non-Hodgkin Lymphoma	50	0.9	0.7	1.2	18	0.7	0.4	1.1	32	1.2	0.8	1.7
Burkitts Lymphoma	11	0.2	0.1	0.4	2	0.1	0.0	0.3	9	0.3	0.2	0.6
Other Malignant Epithelial Neoplasms	166	3.1	2.6	3.6	108	4.1	3.3	4.9	58	2.1	1.6	2.7
Thyroid Carcinoma	22	0.4	0.3	0.6	14	0.5	0.3	0.9	8	0.3	0.1	0.6
Malignant Melanoma	48	0.9	0.7	1.2	24	0.9	0.6	1.4	24	0.9	0.6	1.3
Central Nervous System and Miscellaneous	190	3.6	3.1	4.1	93	3.6	2.9	4.4	97	3.6	2.9	4.4
Leukemia	217	4.1	3.6	4.7	99	3.8	3.1	4.7	118	4.4	3.6	5.2
Lymphoid Leukemia	161	3.1	2.6	3.5	78	3.0	2.4	3.8	83	3.1	2.5	3.8
Acute Myeloid Leukemia	34	0.6	0.4	0.9	14	0.5	0.3	0.9	20	0.7	0.5	1.1
Soft tissue sarcomas	238	4.4	3.9	5.0	149	5.6	4.7	6.6	89	3.3	2.6	4.0
Rhabdomyosarcoma	19	0.4	0.2	0.6	10	0.4	0.2	0.7	9	0.3	0.2	0.6
Total	1705	22.0	20.7	23.2	862	23.3	21.5	25.2	843	20.7	18.9	22.4

Figure 4: Childhood Cancer Incidence Rate in New Hampshire, by Cancer Site, 1990-2005**Table 2: Rate of Childhood Cancer per 100,000 by Age Group and Cancer Site, 1990-2005**

Cancer Site	0-4		5-9		10-14		15-19	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Leukemia	94	7.5	46	3.4	45	3.3	32	2.4
Lymphoma	14	1.1	18	1.3	35	2.6	83	6.1
Central Nervous System and Miscellaneous	53	4.2	50	3.7	44	3.2	43	3.2
Neuroblastoma & other PNS	39	3.1	4	0.3	4	0.3	0	0.0
Retinoblastoma	10	0.8	1	0.1	1	0.1	0	0.0
Renal Tumors	21	1.7	1	0.1	2	0.1	0	0.0
Hepatic Tumors	8	0.6	1	0.1	1	0.1	1	0.1
Malignant Bone Tumors	4	0.3	11	0.8	20	1.5	26	1.9
Soft tissue sarcomas	13	1.0	20	1.5	44	3.2	161	11.9
Germ Cell Tumors	2	0.2	3	0.2	7	0.5	40	3.0
Other Malignant Epithelial Neoplasms	3	0.2	6	0.4	21	1.5	136	10.0
Other Unspecified	1	0.1	0	0.0	0	0.0	1	0.1
Total	262	21.0	161	12.0	224	16.4	523	38.6

Age differences:

- The highest incidence of childhood cancer occurs in children aged 15 to 19 (38.6 per 100,000 per year) followed by children aged 0 to 4 years (21.0 per 100,000).
- Among the youngest age group, the most frequently occurring cancers are leukemia's, central nervous system tumors, and neuroblastomas.
- Cancers occurring among children aged 15 to 19 differ from those occurring in children aged 0 to 14. With increasing age, the types of cancer begin to resemble adult types of cancer. Carcinomas, lymphomas, melanoma, and other malignant epithelial and unspecified tumors are most commonly diagnosed in this age group.

Figure 5: Childhood Cancer Incidence Rate in New Hampshire, by Age Group, 1990-2005

SEER White - Surveillance Epidemiology and End results age adjusted rates for whole of US white race.

Figure 6: Childhood Cancer Incidence Rate in New Hampshire, by Age Group & Cancer, 1990-2005